

## REMARKS

Claims 1-18 are presented for consideration, with Claim 1 being independent.

Claim 1 has been amended to further distinguish Applicant's invention from the cited art. In addition, Claims 16-18 have been added to provide an additional scope of protection. Support for the claim amendments and new claims can be found, for example, in Figure 2 and the specification beginning on page 14, line 12.

Applicant notes with appreciation that Claims 11, 12, 13/11, 13/12, 14 and 15 are indicated as containing patentable subject matter and would be allowed if placed in independent form. These claims remain in dependent form, however, as it is respectfully submitted that parent Claim 1 is patentable over in its own right for the reasons set forth below.

Claims 1, 2 and 4-9 stand rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Ophey '247. In addition, Claims 1-10 and 13/10 are rejected under 35 U.S.C. §103 as allegedly being obvious over Maeda '302 in view of Danziger '297. These rejections are respectfully traversed.

Applicant's invention as set forth in Claim 1 relates to a diffractive optical element comprised of a grating structure with a periodic first blazed type grating portion and a periodic second blazed type grating portion which is arranged on a light exit side of the first blazed type grating portion. Claim 1, as amended, recites that in at least one of the first blazed type grating portion and the second blazed type grating portion having a period larger than a used wavelength, period grating section structures smaller than a used wavelength are arranged in a periodic manner.

In accordance with Applicant's claimed invention, a diffractive optical element providing high performance can be achieved.

The Ophey patent relates to an optical transmissive lens element 1 comprised of a lens body 3 having an entrance surface 4 and an exit surface 5. The entrance surface has a grating 10 alternately comprising grating grooves 11 and intermediate grating strips 12. The exit surface 5 is provided with grating grooves 16 and intermediate strips 17 arranged to be perpendicular to the grating 10.

Contrary to the assertion on page 2 of the Office Action, Ophey is not read to teach or suggest, among other features, a grating structure having first and second periodic blazed type grating portions. Moreover, Ophey fails to teach or suggest that in at least one of the first and second blazed type grating portions having a period larger than a used wavelength, period grating section structures smaller than the used wavelength are arranged in a periodic manner. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. §102(b) is respectfully requested.

The Maeda patent relates to an optical pick-up device that includes a diffractive optical element 7 with a first grating portion 7a and a second grating portion 7b (see Figure 3). With respect to Claim 1, the Office Action acknowledges that Maeda does not teach the first and second grating portions are blazed type grating portions.

The secondary citation to Danziger was cited to compensate for this deficiency in Maeda. In Danziger, a diffractive optical element includes a base 10 that has phase zones 1 of

phase levels 12. Danziger, however, is not understood to provide in at least one of first and second blazed type grating portions having a period larger than a used wavelength, period grating section structures smaller than the used wavelength arranged in a periodic manner, as set forth in Claim 1.

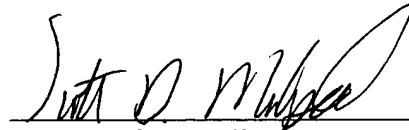
Therefore, the proposed combination of Maeda and Danziger, even if proper, still fails to teach or suggest Applicant's claimed invention. Thus, reconsideration and withdrawal of the rejection of Claims 1-10 and 13/10 under 35 U.S.C. §103 is respectfully requested.

Accordingly, it is submitted that Applicant's invention as set forth in independent Claim 1 is patentable over the cited art. In addition, dependent Claims 2-18 set forth additional features of Applicants' invention. For example, Claim 16 sets forth that the corresponding grating section of the first and second blazed type grating portions have the same period, and Claim 17 recites that a period of the periodic structure is smaller than a period of the grating sections of the first and second blazed type grating portions. Also, Claim 18 sets forth that the periodic structure is a rib-like sub-wavelength structure of various depth. Independent consideration of the dependent claims is respectfully requested.

In view of the foregoing, reconsideration and allowance of this application is deemed to be in order and such action is respectfully requested.

Applicant's undersigned attorney may be reached in our Washington, D.C.  
office by telephone at (202) 530-1010. All correspondence should continue to be directed to our  
below-listed address.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Scott D. Malpede", is written over a horizontal line.

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